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10/646,430	08/22/2003	Brandon Stuart Burroughs		9170

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PROCOPIO, CORY, HARGREAVES & SAVITCH LLP  
530 B STREET  
SUITE 2100  
SAN DIEGO, CA 92101

EXAMINER

PIZIALI, JEFFREY J

ART UNIT PAPER NUMBER

2673

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/646,430

Applicant(s)

BURROUGHS, BRANDON  
STUART

Examiner

Jeff Piziali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 8, 10 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/22/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 8, 10, and 16 are objected to because of the following informalities:

Claim 8 recites the limitation "the respective angles" in line 1;

Claim 10 recites the limitation "the left-most input key and the right most input key" in line 5; and

Claim 16 recites the limitation "the left-most input key and the right most input key" in lines 6-7;

There is insufficient antecedent basis for these limitations in the respective claims.

Appropriate correction is required.

2. Claims 7, 15, and 20 are objected to because of the following informalities: Each claim separately recites, "radii of curvature between 10 mm and infiniti." It is assumed the applicant is not referring here to a *Nissan Infiniti*, but instead means "infinity." Appropriate correction is required.

### ***Specification***

3. The disclosure is objected to because of the following informalities: "infiniti" should also be corrected to "infinity" on page 4, line 11 of the specification. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 9, 10, 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. The term "a generally upwards V shape" in claims 9, 10, 16 is a relative term which renders the corresponding claims indefinite. The term "a generally upwards V shape" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It would unclear to one skilled in the art precisely how approximate in form to the letter "V" a shape must be before constituting a "a generally upwards V shape."

7. Claims 11-15 and 17-20 are rejected under 35 U.S.C. 112, second paragraph as simply being dependent upon rejected base claims.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 2, 4-11, and 13-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Meringer (US 2003/0002007 A1).

Regarding claim 1, Meringer discloses a keyboard for a handheld electronic device (see Paragraph 4), the keyboard configured for use with thumbs of a user (i.e. "Thumb Typing") and comprising: a left set of one or more rows of input keys [Fig. 1; 1] and a right set of one or more rows of input keys [Fig. 1; 3] separated by a centerline [Fig. 1; vertical line through center of display 2], the left set of one or more rows of input keys arranged in one or more respective arcs having one or more respective arc centers located to the left of the centerline, and the right set of one or more rows of input keys arranged in one or more respective arcs having one or more respective arc centers located to the right of the centerline (see Fig. 1; Paragraphs 12-13).

Regarding claim 2, Meringer discloses a QWERTY keyboard layout (see Fig. 1; Paragraph 12).

Regarding claim 4, Meringer discloses the one or more respective arc centers of the left set of one or more rows of input keys are concentric and the one or more respective arc centers of the right set of one or more rows of input keys are concentric (see Fig. 1; Paragraph 13).

Regarding claim 5, Meringer discloses the one or more respective arc centers of the left set of one or more rows of input keys are collinear and the one or more respective arc centers of the right set of one or more rows of input keys are collinear (see Fig. 1; Paragraph 13).

Regarding claim 6, this claim is rejected by the reasoning applied in rejecting claim 5; furthermore, Meringer discloses the one or more respective arc centers of the left set of one or more rows of input keys are collinear and located in at least one of a vertical line and a horizontal line and the one or more respective arc centers of the right set of one or more rows of input keys are collinear and located in at least one of a vertical line and a horizontal line (see Fig. 1; Paragraph 13).

Regarding claim 7, Meringer discloses the respective arcs of the left set of one or more rows of input keys and the respective arcs of the right set of one or more rows of input keys include radii of curvature between 10 mm and infinity (see Fig. 1; Paragraph 13).

Regarding claim 8, Meringer discloses the respective angles formed by respective arcs of the left set of one or more rows of input keys and the respective arcs of the right set of one or more rows of input keys are between 0 and 90 degrees with respect to the centerline (see Fig. 1; Paragraphs 4 and 13).

Regarding claim 9, Meringer discloses each row of the one or more rows of each set include a left-most input key [Fig. 1; Q] and a right-most input key [Fig. 1; P], the left set of one or more rows are opposite the right set of one or more rows (see Paragraph 15), and lines drawn through the left-most input key and the right most input key of opposite rows intersect the centerline to form a generally upwards V shape (see Fig. 1).

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Regarding claim 10, this claim is rejected by the reasoning applied in rejecting claims 1 and 9.

Regarding claim 11, this claim is rejected by the reasoning applied in rejecting claim 2.

Regarding claim 13, this claim is rejected by the reasoning applied in rejecting claim 8.

Regarding claim 14, this claim is rejected by the reasoning applied in rejecting claim 1.

Regarding claim 15, this claim is rejected by the reasoning applied in rejecting claim 7.

Regarding claim 16, this claim is rejected by the reasoning applied in rejecting claims 1 and 9; furthermore, Meringer discloses providing a thumb keyboard (see Paragraph 4); using only the left thumb to input information into the handheld electronic device using the left set of one or more rows of input keys; using only the right thumb to input information into the handheld electronic device using the right set of one or more rows of input keys (see Fig. 1; and Claim 1 on Page 2).

Regarding claim 17, this claim is rejected by the reasoning applied in rejecting claim 2.

Regarding claim 18, this claim is rejected by the reasoning applied in rejecting claim 8.

Regarding claim 19, this claim is rejected by the reasoning applied in rejecting claim 1.

Regarding claim 20, this claim is rejected by the reasoning applied in rejecting claim 7.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 3 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meringer (US 2003/0002007 A1) in view of Griffin et al (US 6873317 B1).

Regarding claim 3, although Meringer teaches using a QWERTY keyboard layout (see Paragraph 12), the reference does not expressly disclose alternately using a DVORAK keyboard layout. However, Griffin does clearly teach using a DVORAK keyboard layout interchangeably with a QWERTY keyboard layout (see Column 1, Lines 45-53).

Meringer and Griffin are analogous art, because they are both from the shared field of arced keyboards facilitating thumb-typing. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to substitute Griffin's DVORAK keyboard layout in the place of Meringer's QWERTY keyboard layout, so as to make use of an alternate, standard keyboard layout that is familiar to the user.

Regarding claim 12, this claim is rejected by the reasoning applied in rejecting claim 3.



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***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Louis (US 6379060 B1), Robbins (US 6323845 B1), Grezeszak (US 6132118 A), Rakoski (US 6088022 A), Leu et al (US 6084576 A), Miller (US 5660488 A), Szmanda et al (US 5466078 A), O'Brien et al (US 5311210 A), Crews (US 5017030 A), Whitaker (US 4067431 A), Einbinder (US 3945482 A), and John (WO 2075514 A2) are cited to further evidence the state of the art pertaining to keyboards for handheld electronic devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Piziali whose telephone number is (571) 272-7678. The examiner can normally be reached on Monday - Friday (6:30AM - 3PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J.P.

1 March 2006



BIPIN SHALWALA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600